

Application No. 10/765,996

Reply to Office Action of November 30, 2006

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-8 (Canceled).

Claim 9 (Previously Presented): A novel olefin mixture preparable by the following steps,

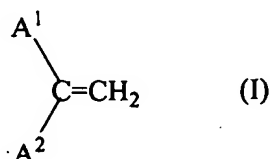
subjecting a C<sub>4</sub>-olefin mixture to metathesis,

separating off olefins having from 5 to 8 carbon atoms from the metathesis mixture,

subjecting the separated-off olefins individually or as a mixture to dimerization to give olefin mixtures having from 10 to 16 carbon atoms,

wherein

- a) the components have from 10 to 16 carbon atoms
- b) the proportion of unbranched olefins is less than 25% by weight
- c) the proportion of components having a structural element of the formula I (vinylidene group)



wherein A1 and A2 represent aliphatic hydrocarbon groups, is below 10<sup>%</sup> by weight.

Claim 10 (Original): An olefin mixture as claimed in claim 9, which has a proportion of unbranched olefins of less than 20% by weight.

Claim 11 (Previously Presented): An olefin mixture as claimed in ~~one of claims 9 and 10~~ claim 9, wherein at least 80% of the components of the dimerization mixture have, in the

range from 1/4 to 3/4, of the chain length of their main chain, one branch, or two branches to adjacent carbon atoms.

Claim 12 (Previously Presented): An olefin mixture as claimed in claim 9, wherein, at the branching sites of the main chain, predominantly groups having (y-4) and (y-5) carbon atoms are bonded, where y is the number of carbon atoms in the monomer used for the dimerization.

Claim 13 (Previously Presented): An olefin mixture as claimed in claim 9, wherein the ratio of aliphatic to olefinic hydrogen atoms is in the range

$H_{\text{aliph.}} : H_{\text{olefin.}} = (2*n-0.5) : 0.5 \text{ to } (2*n-1.9) : 1.9$ , where n is the number of carbon atoms in the olefin obtained in the dimerization.

**Previously Presented**

Claim 14 (~~Currently Amended~~): An olefin mixture as claimed in ~~one of claims 9 to 13~~ claim 9, wherein the ratio of aliphatic to olefinic hydrogen atoms is in the range

$H_{\text{aliph.}} : H_{\text{olefin.}} = (2*n-1.0) : 1 \text{ to } (2*n-1.6) : 1.6$ .

Claims 15- 20 (Canceled).

Claim 21 (Previously Presented): A novel surfactant alcohol obtainable by the following steps

subjecting a C<sub>4</sub>-olefin mixture to metathesis;

separating off olefins having from 5 to 8 carbon atoms from the metathesis mixture;

subjecting the separated-off olefins individually or as a mixture to dimerization to give olefin mixtures having from 10 to 16 carbon atoms;